BRUHAT BANGALORE MAHANAGARA PALIKE

Detailed Estimate for :- Drilling of borewell, providing lighting to pathway and other developmental works to Lakkappa Layout park (Singapore Layout) in Ward No.11

Estimated cost Rs.14.50 Lakhs

Sl. No	Description of work	No	Dimensions L	B	D	qty	Rate	Unit	Amount
	SUB ESTIMATE: DRILLING OF BOREWELL								
1	Carrying out geophysical survey Geophysical investigation of site for sinking Borewell for supplying drinking water to the habitation either through the Hand Pump, MWS or PWSS by vertical electrical sounding by adopting Venner or Schlumbergers's method, including reconnaissance survey of geological formation, Geophysical investigation of existing Ground Water in the vicinity, its quality, quality & acceptability of the users indicating the location of the site, recommended depth of casing pipe required to seal the tope unconsolidated formation including an extra depth 1.0 metre in consolidated formation for aquifr proposed to be tapped probable yield and other information required including transportation of instrument and accessories to work site, engaging technical personal and labour required etc., (PRED SR P-37, I-9.4)					NO	1600.00		1600.00
							Per No.		
2	Sinking of Borewell of 165 mm clear using fast hydraulic								
	Up to 50mtr depth					50.00	265.00		13250.00
							Per Mtr		
	Above 50 mtr upto 100 mtr					50.00	345.00		17250.00
							Per Mtr		
	Above 100 mtr upto 150 mtr					50.00	380.00		19000.00
							Per Mtr		
	Above 150 mtr upto 200 mtr					50.00	440.00		22000.00
							Per Mtr		
	Above 200 mtr upto 250 mtr					50.00	480.00		24000.00
							Per Mtr		
	Above 250 mtr upto 320 mtr					70.00	540.00		37800.00
							Per Mtr		
3	Providing and fixign PVC casing pipe of dia 30 cms of thickness 4 mm inc;uding loaidng and unloading transporation etc., complete					25.00	1050.00		26250.00
							Per Mtr		

	Providing of ISI mark 175 mm nominal bore medium black ERW casing ipe of 5mm thick black electric continous welded mild steel tube material confirming to IS 1387/1993 & manufactured from hot rolled steel skelp / stripes in random length of 4 to 7 mtrs both ends threaded confirming to IS 554 / 1985, one and fixing with a socket and the other end with a plastic protection end (inclusive of all taxes) PRED SR P-II, I-53A	42.00	1325.00		55650.00
			Per Mtr		
5	Providing 165 mm dia MS collar, PRED SR P-II, I-55	6.00	150.00		900.00
			Per No.		
6	Supply and delivery at site brand new Texmo / Innoval / Lubi / Sabar / Atalanta / Calamal / waterman / Radha make suitable vertical installation in 150mm dia. Borewells comprising of single stage or multistage CF pump close coupled by means of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water (Wet type) squirrel cage submersible induction motor suitable for operation of 3Ph., 50Hz. 380/44 volts AC supply fitted with required accessories such as suction. casing, suction strainers, sand guard. Non return valve etc., complete. The pupm and motor shall form an intergal unit with all the required fittings. (As per rate approved by KUWS & DB wef 16-05-2006) 7.5 HP 30 stage	1.00	39300.00		39300.00
			Per No.		
7	Providing and fixing in galvazed/mild steel tubed (Heavey class as per IS 1239 part-1990) 50 mm dia nominal bore with all fittings including cost of all material labour charges. HOM of equipment and testing complete as per specification PWD SR Bangalore Circle 2010-11, P-79, I-13.15	302.00	402.75		121631.00
			Per Mtr		
8	Supply Heavy Duty, galvanized / mild steel color suitable for 32 mm dia nominal bore galvanized / mild steel tube. (BWSSB approved rates)	42.00	80.00		3360.00
			Per No.		
9	Supply of galvanized / mild steel union suitable for 32 mm dia nominal bore galvanized / mild steel tube (BWSSB Approved rates)	1.00	372.00		372.00
			Per No.		
10	Supply of Galvanized/mild steel elbow suitable for 32 mm dia nominal bore galvanized / mild steel tube (BWSSB approved rates)	2.00	190.00		380.00

							Per No.		
	Supply of Non return valve suitable for 50mm nominal bore galvanized / mild steel tube PWD SR P-XVII, I-466					1.00	800.00		800.00
							Per No.		
12	Erection of pumpset including aligning and balancing with all necessary erection material and labour including supply and erection of two pair of supporting clamps borewell cap, cable and water tight gland cable protectiors, bolts, nuts, etc., involved in the job. (PHE, SR rate)					1.00	1710.00		1710.00
							Per No.		
13	Supplying and fully automatic star-delta unit push with suitable wires, 3 contrsctors, one adjustable thermal timer mounted on a common base plate head in steel enclosure for use on 400/440 volts 3 phase and wired after to the existing wooden board for motor, PWD Elec SR P-XIV, I-8-(2)					1.00	5330.00		5330.00
							Per No.		
14	Supplying and fixing using necessary wires over an existing panel board a single phase preventor suitable for motor upto 20HP capacity. PWD Elec. SR. P-XIV, I-9					1.00	735.00		735.00
							Per No.		
15	Supplying shunt capacitors conforming to IS 2834,3 phase 400/440 volts grade capacitor in KVAR rating, Nos, PWD Elec SR P-24-I-15©					1.00	504.00		504.00
							Per No.		
16	Fabricating supplying and mounting 1200x900x350mm MS box made out 18 SWG suitable for floor /wall mounting, fully weather proof with double slanted top as per drawing with providion for better heat dissipation provided with hinged front cover with clear opening of 100x100mm, protected by glass cover clamped to the door on EB meter sode to facilitate meter reading, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box shoubl be finished with approved colour enameled metal paint etc., complete PWD Elec SR P-42, I-38C					1.00	10136.00		10136.00
							Per No.		
17	Supplying and fixing miniature circuit breakers/Isolatorss on existing MCB distribution boards using necessary fixing materials and wiring complete as required PWD Elec SR P-37, I-FC					1.00	975.00		975.00
							Per No.		

	Supplying and fixing angle iron work fabricated out of MS angle iron and MS flat with bolts, nuts, washers etc., and painted with 2 coats of red oxide and other two coats of approved paint PWD Elec SR P-41, I-37(a) a) Angle iron 40x40x6mm	1.00	240.00		240.00
			Per No.		
19	Grouting angle iron (P-32, I-11)	2.00	140.00		280.00
			Per No.		
20	Supplying and fixing regular MCB distribution boards on wall/wood board/flush imounting using required clamps, bolts, nuts etc with provision for fixing suitable type capacity MCB's single phase / 3 phase / single door with power coated painting etc complete PWD Elec SR P-37, I--13f(e)	1.00	560.00		560.00
21	Supplying and replacing copper workshop flexible card or plastic TC wire (As per approved rates Superintending Engineer, RDED Engineering Section, Bangalore vide letter No.2.5sqm flat 3 core copper wire.	300.00	145.00		43500.00
			Per Mtr		
22	Supplying and replacing one of the fuse cutouts having porcelain base of approved quality on the existing wooden blockand wired complete (P-44, I-38© 63 amps.	3.00	132.50		398.00
			Per No.		
23	Supplying, fixing, wiring, earth electrode for grounding conduits, IC cutouts and other equipments on the meter board using 40mm dia 2.90mm thickGI pipe 2.5 mtr long buried in apit. The pit should be filled with equal proprotion of salt and charcoal 150mm alround the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per IISI specification 7.3.3 of IS 732 using 120mm dia bolt, nuts, washers and chechnus etc, complete the pipe shall have 16 through of 122mm dia PWD Elec SR P-68, I-1	1.00	1950.00		1950.00
			Per No.		
24	Supllying and LTUG cable having aluminium conductor PVC insulated sheathed, galvanized, stell wire/ steel tape amounted cable with PVC outsheathing 1.1KV class (conforming to IS 1554) PWD Elec SR P-68&69,	30.00	150.00		4500.00
			Per Mtr		

	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete PWD Elec SR P-70, I-6b					20.00	50.00		1000.00
							Per Mtr		
26	Supplying and fixing of calss A GI pipe on pole / wall / drain crossing with necessary clamping arrangements for UG cable of 1.1KV class (P-59, I-13(a) 40mm upto 16 sqm					3.00	370.00		1110.00
							Per Mtr		
27	Electric Deposit					1.00	10000.00		10000.00
28	earth work excavation for foundation of building, water supply, sanitary lines and electrical conditions either in pits or in trenches 1.5m and above in hard soil not exceeding 1.5m in depth including dressing the bottom and sides of pits and trenches, stacking the escavated soil clean from edges of excavation with lead upto 50m after breaking of complete as per specifications (KSB 2.1) (b) 2.3.5, P-5, 1-2.4)								
	for poles	20	0.60	0.60	0.60	4.32			
						4.32	264.60	Cum	1,143.00
	Basic rate	245.00							
	Area Weightage @ 8%	19.60							
	Total	264.60							
29	Providing and laying in positionp lain cement concrete of Mix M 7.5 with OPC cement @ 180 kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.85 cum and fine aggregates @ 0.57 cum machine mixed, concrete laid in layers not exceeding 15cms, thick, well compacted, in foundation and plinth, including cost of all materials, labour HOM of machinery curing complete as per specification, specification No. KBS 4, 1, 4.2 (PageNo.12, Item No.4.3 PWD S.R. 13-14)								
	for poles	20	0.60	0.60	0.15	1.08			
					Total	**1.08**	4847.04	cum	5235.00
	Basic Rate	4488.00							
	Area Weightage @8%	359.04							
	Total	4847.04							

	Providing and laying in positionp lain cement concrete of Mix M 15 with cement @ 240 kgs, with 20 mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum machine mixed, concrete laid in layers not exceeding 15cms, thick, well compacted, in foundation and plinth, including cost of all materials, labour HOM of machinery curing complete as per specification, specification No. KBS 4, 1, 4.2 (PageNo.12, Item								
	for poles	20	0.60	0.60	0.45	3.24			
					Total	**3.24**	5327.64	cmtr	17262.00
	Basic Rate	4933.00							
	Area Weightage @ 8%	394.64							
	Total	5327.64							
31	Fabricating, supplying and erection of 4 Mtrs long hot dip Galvanized Octagonal pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, bakelite sheet nd MCBs as per IS specifications suitable to withstand the wind speed of 180 kmph for 4 Mtr pole having dimensions bottom 130mm top 70 mm with 3/4mm thick, suitable base plate and 4 nos of 220x220x12mm long J bolts along with template and the pole shall be galvanized with not less than 65 micron etc., (without foundation for foundation details refer prevatiling Civil SR) a) 4 mtr height (bottomdia 130mm, top dia 70mm, 3mm thick ; size of base plate 220mmx220x12mm;4 Nos M20x700mm long 'J' bolts and nuts) Page 75 Item no. 22.a)								
		20				20.00			
					Total	**20.00**	8500.00	Each	170000.00
32	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete (As per Civil SR KSRB 1-2, P-7) P-70, I.No.6, b)c) Electrical S.R. 10-11								
	in hard soil	1	300.00			300.00	50.00	mtr	15000.00
33	Providing and filling sand in excavated trench to cover already laid UG cable to a depth of 150mm alround the cable (As per civil SR KSRB, I-26, P-8) P./70 I. No.7								
		1	270.00			270.00	66.00	mtr	17820.00
34	supplying of LT UG cable having aluminium conductor PVC insulated, sheathed, galvanised, steel wire/steel tap armoured cable with PVC outer sheathing 1.1 KV class I Class 'A' PVC Cable, P.No.68, I. No.4 g) Electrical SR. 10-11								87720
	3.5 core 50 sqmm	1	300.00	258		300.00	340.00	mtr	102000.00
	b) 2 core 10sqmm	20	10.00			200.00	110.00	mtr	22000.00
35	supply and fixing of heavy duty cable glands suitable for UG cableof 1.1 Kvclass (metal only) P.No.70 I.No.11 e)								
	d) 50 mm dia	1	4.00			4.00	260.00	Each	1040.00
36	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required. P. 69 I.No. 5 I)b) Electrical SR 10-11								

	a) 25 sqmm to 75 sqmm	1	300.00			300.00	11.00	mtr	3300.00
	Supplying and making straight through cable joint with epoxy resin including ferrules and other jointing materials forPVC insulated and PVC sheathed steel tape, wire armoured aluminium conductor cable of 1.1 KV grade of the following sizes P.No.71 I.No.12 d)								
	d) 3 1/2 x 50 sqmm	1	3.00			3.00	1210.00	per Kit	3630.00
38	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen / insulating compound complete with terminals, clamps, bolts, nuts and washers etc., P. 70 I.No.10e) Electrical S.R. 10-11								
	e) 50 sqmm	20				20.00	413.00	each	8260.00
39	Supply of 125 Watt HPMV lamp fitting with round/conical/diamond shaped HDPE doom mounted a cast aluminium spigot fitted with VPIT open constructioin low loss heavy duty copper wound ballast, of improvement capcitor complete with lamp holder for fixing of 125 Watts MV lamp suitable to operate on 230V toHz AC supply including 125 Watts HPMV lamp P. No.18 I.No. 8 a)								
	a) Group 'A'	20				20.00	3200.00	each	64000.00
40	Fixing charges of post top/Gate/Garden fitting on the existing CI/ GI or any other pipe using required size of reducer, wiring using suitable wires etc.,complete Page No.28 I.no.6								
		20				20.00	165.00	each	3300.00
41	Supplying and fixing regular MCCB distribution panel confirm to IS 8828, on wall / wood board / flush mounting using required clamps, bolts, nuts etc., with provision for fixing of suitable type capacity MCCB's as an incomer for 3 phase Doubledoor with necessary bus bard completely wired to use on 440 Vots 3 Phase 4 wire powder coated painting etc., complete with a provision for fixing of single/ three phase suitable capacity MCCB/MCB's as outgoing confirming to IS8828 P No.36 I.No.11 a)								
	a)4way 1) Group A	1				1.00	5835.00	each	5835.00
42	Supplying 100 Amps rated 3 phase with neutral bus bar using required capacity electrolytic alluminium strips covered with heat shrinkable coloured PVC sleeve, mounted on phenolic / FRP/DMC insulator which are mounted on powder coated 40x6mm M.S. flat frame work in existing panel board. The bus bar shall have suitable holes for terminatioin of incoming and outgoing cables as per IS specification with necessary bolts, nuts and washers etc., complete P. No.41, I. No.36 a)								
	a)100Amps 4x30x6mm Alluminium strips	2				2.00	1600.00	Rmtr	3200.00
43	Supply and fixing of MODULAR MCB Devices (Tripper) with Breaking capapcity of 6KVA Page No.43 I.No. 43, II.								
	II TP.b) 40 Amps	1				1.00	875.00	each	875.00

	Supplying, fixing, wiring, earth electrode for grounding conduits,I.C. cutouts and other equipments on the meter board using 40mm dia 2.90 mm thick GI pipe 2.5 mtr long burried in a pit..... The pit should be filled with equal proprotion fo salt and charcoal 150mm alround the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and checknuts etc., the pipe shall have 16 through holes of 12mm dia P. No68 I. No.1								
		1				1.00	1950.00	Each	1950.00
45	Fabricating supplying and mounting 1200x900x350mm MS box made out 18 SWG suitable for floor /wall mounting, fully weather proof with double slanted top as per drawing with providion for better heat dissipation provided with hinged front cover with clear opening of 100x100mm, protected by glass cover clamped to the door on EB meter sode to facilitate meter reading, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box shoubl be finished with approved colour enameled metal paint etc complete PWD Elec SR P-42 I-					1.00	10136.00		10136.00
							Per No.		
46	Manufacturing, Providing and Fixing a Gazeboo (of size 22 feet Dia-Approximate) made of MS Round pipes of 6 inches diameter of 12 SWG for pillars 10 feet in height, in which 8 ft will be above the ground level and 2 feet embedded in cement concrete and provided with MS plate on top of the pillars. MS I section 100x50mm of heavy guage (for rafters) in placed between the poles on top of the flush plate. Also MS anglular tubes of 100x40mm are to be mounted vertically on all 8 pillars. MS angular tubes of 40x20mm reepers are welded horizontally in between the rectangel tubes for a distance of 1 feet approximately so as to get the desired octoganal shape, for fixing approved guality corrugated Mangalore tiles on the roof (2 layer as per design) Flat design tiles and pointed with cement mortor. The Gazebo is to be fixed on a suitable platform, thecentral height being 15 to 16 feet and including allround bed concrete 1:4:8 and size stone masonry foundation as per the aprroved design, drawing, specifciation. The MS pipes are to be fixed with CC 1:1.5:3 and the flooring is constructed with classic Eeurocon tiles placed on cement concrete 1:4:8 and tampered with fine red earth, with cement slurry. The work includes earth work excavation, concreteing, masonary work and cost of all materials, flabour, equipments,								
						1	387925.00	Nos	387925.00
47	Providing and fixing stone PARAGOLA 20cm x 20 thick granite pargolas fully polishind on all four sides, machine cut as per the deisign. The vertical pillers are to be fixed in cement concrete 1;2:4 the work includes cost of all materials, labour equipments, machineries, lead & lifts loading and unloading etc., complete and execute the work as per the instructions, directions of the Engineer Engineer								
		1	30.00			30.00			
						30.00	4000.00	rmt	120000.00

roviding and fixing dust bins as per designs, drawing specification and direction of Engineer in charge of works	4.00	4800.00	Nos	19,200
			1435302.00	1,449,582.00
		1-1. - 14353.02	Miscellaneous	344.98 418.00
			GRAND TOTAL Rs.	1450000.00

Certificate

1. The work spot has been inspected and the work is found necessary
2. This estimate is prepared as per C.S.R. of 2014-15
3. This provisions were made in this estimate are necessary and adequate
4. This work cormes under B.B.M.P limits

Asst. Engineer
BBMP

Asst. Executive Engineer
BBMP

Executive Engineer ( )Yelahanka
BBMP

Technical Sanction for Rs.
Administrative Approval
Accorded for Rs 14.50 lakhs.
is accorded under head P0190
registered as CE No. 83 Dt. 28.11.14
to Conditions contained in enclosed
No. Dt.
AE/JE TA SE (BTP) CE (BTP)

Technical Sanction for Rs. 14.50 L.
Fourteen lakhs Fifty Thousand
only
P-0190
Register 49 22.12.14
to condition 263 Dt. 22.12.14.
No:
AE/JE
EE (BTP.Div.)

LAKKAPPA LAY-OUT PARK (SINGAPURA) IN WARD NO 11 B.M.P. BANGALORE.